

STATE OF NEW HAMPSHIRE INTER-DEPARTMENT COMMUNICATION

FROM: Andrew O'Sullivan
Wetlands Program Manager

DATE: August 27th, 2020
AT (OFFICE): Department of
Transportation

SUBJECT **Permit Amendment Request**
Walpole-Charlestown, 14747
(DES#2017-01302)

TO Karl Benedict, Public Works Permitting Officer
New Hampshire Wetlands Bureau
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

Forwarded herewith is a permit amendment request prepared by NH DOT for the Walpole-Charlestown 14747, (DES #2017-01302) project. The proposed work includes reconstructing three miles of NH 12 located between the Connecticut River to the west of the road and the New England Central Railroad (NECR) to the east to improve safety through this corridor. NHDOT is requesting an amendment due to a design change identified during construction.

While preparing to replace the 66" RCP at station 2121+27 in-kind and constructing a new outlet headwall the contractor identified that the soils were not suitable to support the installation of a new headwall. Therefore, NHDOT and the contractor are proposing to extend the 66" cross pipe by 19'. The pipe segments under the road will be replaced in-kind with 66" RCP; the last two sections of culvert (the extension) will be 72" RCP. The supplier of the 66" RCP went out of business and the contractor could only find 72" RCP available. By extending the pipe out to the toe of slope, the contractor can construct a more gradual slope (2:1) and eliminate the need for a headwall. Included herewith is a revised impact sheet (sheet 16) and cross section that reflect the pipe extension design change and the elimination of the headwall.

The permitted design included a 31' long riprap apron extending out from the pipe as a BMP to support routine maintenance and removal of accumulated materials at the outlet of the pipe. The riprap apron will now be 12' long and will still provide the same BMP and maintenance benefits. Due to the flat topography of the area and the characteristics of the resource at the outlet of the pipe, the culvert functions as an equalizer pipe. Included with the amendment is a photo of the impact area. When discussing the proposed design change with the contractor's engineer, they identified that there is low scour potential at the outlet of the pipe under this design revision. Included with this amendment request is the email coordination with the engineer of record, Clinton Mercer, P.E with Jacobs Engineering, confirming the low scour potential.

All of the work will remain within the previously permitted permanent impact area BK. The proposed amendment request was triggered due to the change in design. Since there are no changes to the previously permitted impact areas, NHDOT is not proposing any new or additional mitigation. NHDOT mitigated for the project's permanent wetland impacts through an ARM fund payment. Further details about the associated mitigation proposal for the project can be found within the original application submittal, which can be found online at: <https://www.nh.gov/dot/org/projectdevelopment/environment/units/program-management/wetland-applications.htm#WV> under the project town and project number.

The previous permitted impacts totaled to 429,854 SF (328,449 SF permanent and 101,405 SF temporary). The change in design does not change the total impacted area.

Since NHDOT is not proposing to change the total impacts of the project, additional application fees are not anticipated.

The lead people to contact for this project are Don Lyford, Project Manager (271-2171) or Donald.Lyford@dot.nh.gov) or Sarah Large, Wetlands Program Analyst, Bureau of Environment (271-3226 or sarah.large@dot.nh.gov). If and when this amendment request meets with the approval of the Bureau, please send the amended permit directly to Andrew O'Sullivan, Wetlands Program Manager, Bureau of Environment.

AMO:sel
Enclosures
Amended Impact Plan- sheet 16
Cross Section
Photos
Jacobs Engineering Email Correspondence

cc:
BOE Original
Town of Walpole
Town of Charlestown
David Trubey, NH Division of Historic Resources (Cultural Review within original application)
Michael Hicks, US Army Corp of Engineers
Carol Henderson, NH Fish & Game (via electronic notification)
Maria Tur, US Fish & Wildlife (via electronic notification)
Jeannie Brochi & Beth Alafat, Environmental Protection Agency (via electronic notification)
Kevin Nyhan, NHDOT BOE (via electronic notification)
NHDOT Bureau of Construction (via electronic notification)
NHDOT Bureau of Highway Design (via electronic notification)
Jon Evans, NHDOT BOE Environmental Manager (via electronic notification)
Deidra Benjamin, NHDOT BOE Environmental Coordinator (via electronic notification)

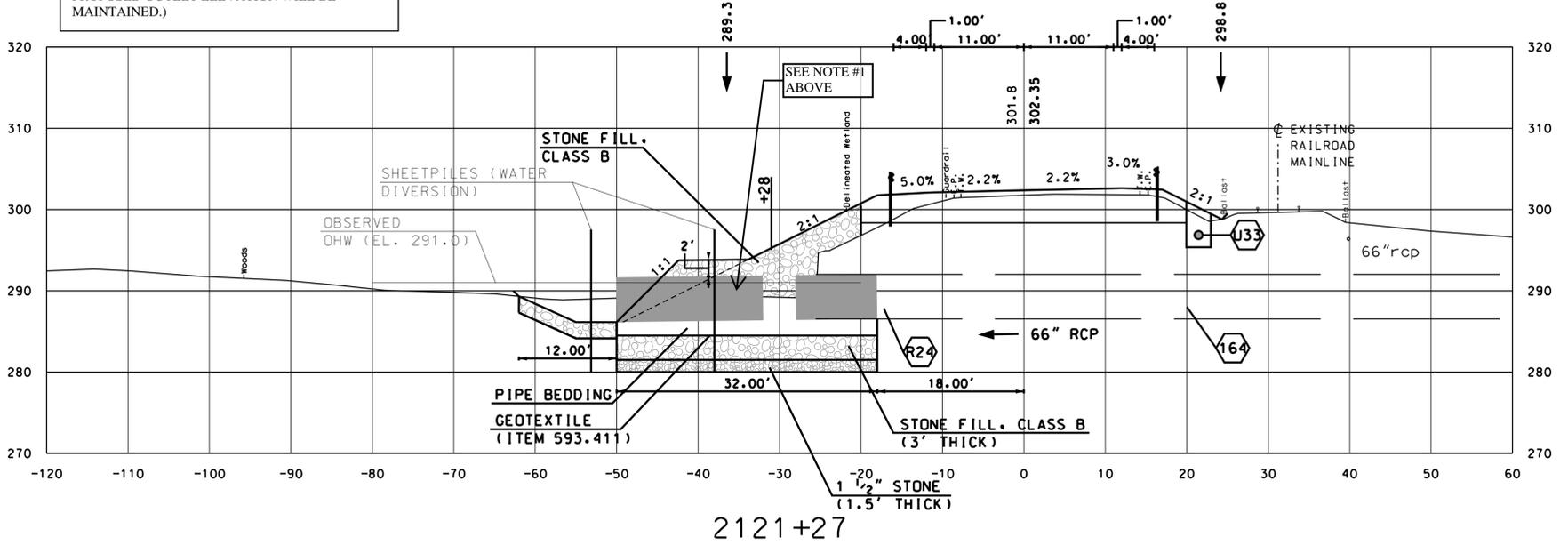
S:\Environment\PROJECTS\WALPOLE\14747\Wetlands\Amendment (2) 8.2020\Amendment Request.docx

SDR PROCESSED	\$SDRNAME\$	DATE	\$DATESDR\$
NEW DESIGN	\$DESIGNNAME\$	DATE	\$DATEDESIGN\$
SHEET CHECKED	\$CHECKNAME\$	DATE	\$DATECHECKED\$
AS BUILT DETAILS		DATE	

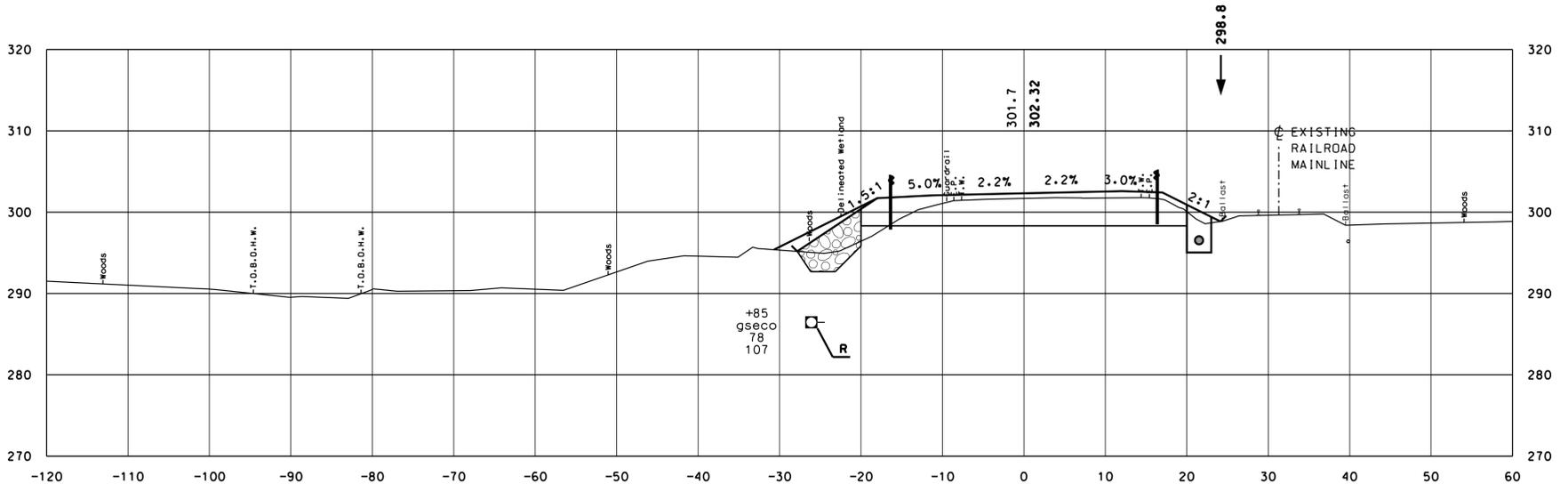
REVISIONS AFTER PROPOSAL				
NUMBER	DATE	STATION	STATION	DESCRIPTION

NOTE 1:
 CONSTRUCT 66" RCP FROM 18' LT TO 34' LT
 CONSTRUCT 72" RCP FROM 34' LT TO 50' LT
 CONNECT PIPES WITH CONCRETE COLLAR

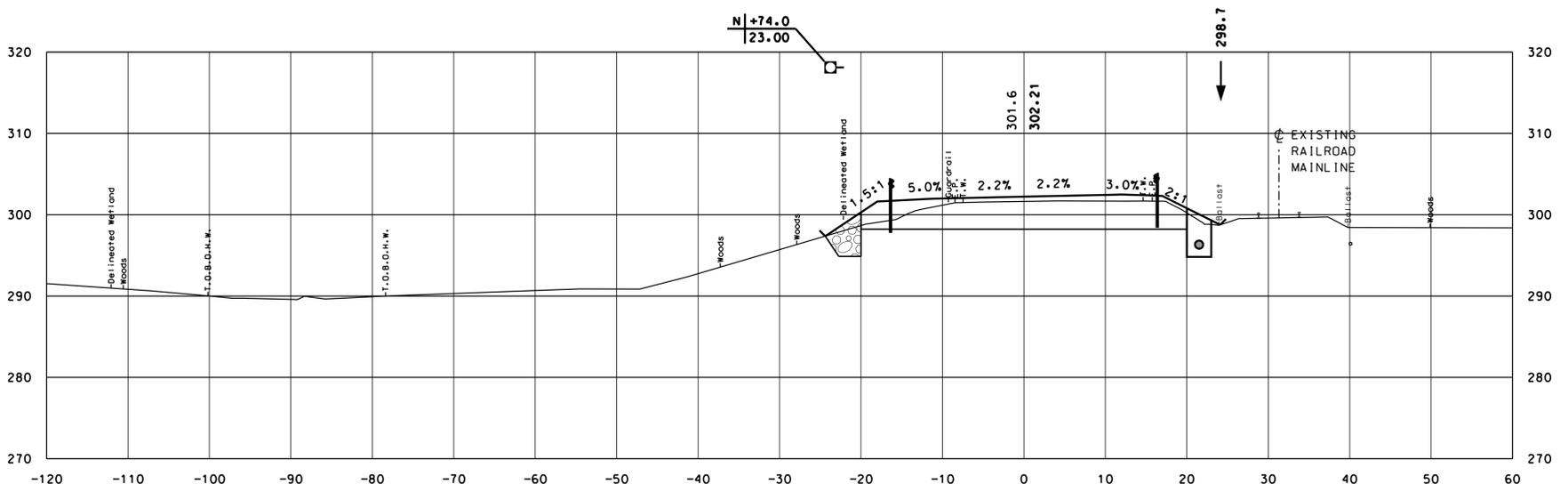
 (REVISION TO PIPE DIAMETER IS A RESULT OF
 THE LACK OF AVAILABILITY OF 66" RCP.
 PROPOSED OUTLET ELEVATION WILL BE
 MAINTAINED.)



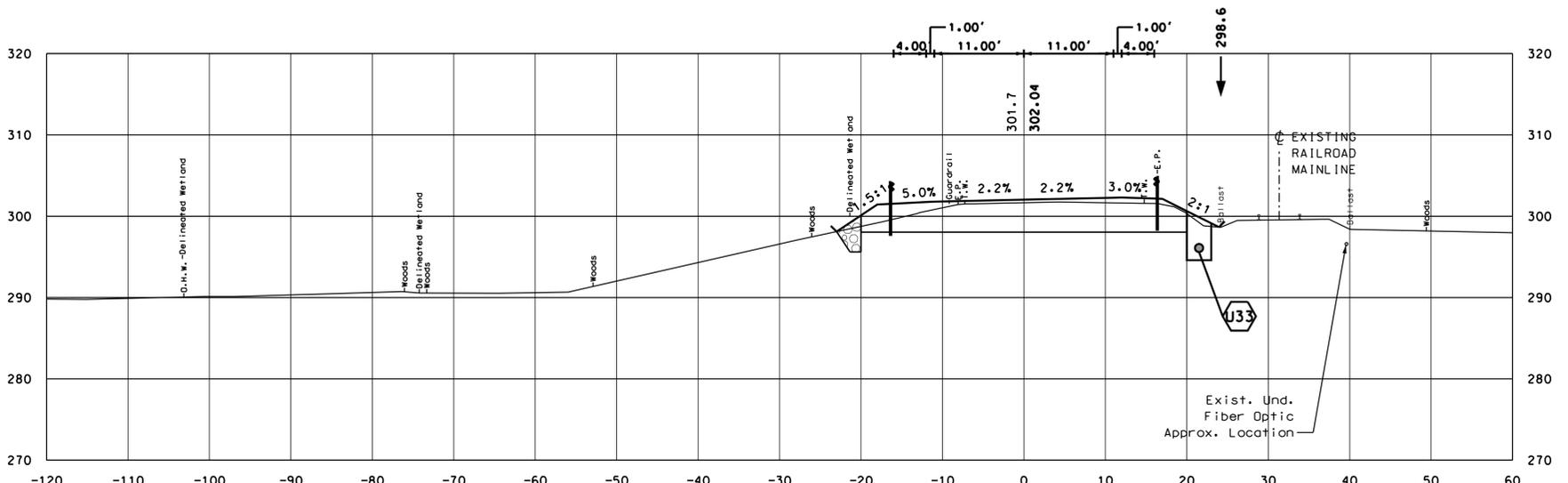
2121+27



2121+00



2120+50



2120+00

N.H. ROUTE 12		MC8M	
COMMON EXCAV.	843.8 C.Y.	ROCK EXCAV.	0.0 C.Y.
FILL	8.1 C.Y.	MUCK EXCAV.	- C.Y.
DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
14747XS_MC8M_20200821	14747	1	1



Impact Area BK; Facing West Towards the Connecticut River

Baldwin, Margarete

From: Mercer, Clinton <Clinton.Mercer@jacobs.com>
Sent: Tuesday, August 25, 2020 10:32 AM
To: Baldwin, Margarete
Cc: Fifield, Samantha
Subject: RE: 14747 Walpole Charlestown pipe extension with slopes

EXTERNAL: Do not open attachments or click on links unless you recognize and trust the sender.

Maggie,

The concept of extending the pipe to the toe of a 2:1 (approx. 50' LT) to El 286.15 and keeping the extent of the stone the same, the apron would be reduced from 31' long to 12' long appears to be a sound solution. This culvert acts as an equalization pipe and the sediment accumulation in the existing pipe confirm the low velocities anticipated. The stream profile downstream rises above the 66" invert out causing ponding and reducing the possibility of high velocities. Scour is not anticipated to be an issue.

Let me know if you need more from us.

Thanks,
Clint

Clinton Mercer, P.E. (NH, OH), ENV SP | Jacobs | Project Manager/Senior Highway Engineer | People & Places Solutions – Built Environment | 1.603.518.1774 direct | 1.603.759.5493 mobile | Clinton.mercer@jacobs.com | www.jacobs.com | 2 Executive Park Drive Suite 205, Bedford, NH 03110